Abstract of the Disclosure

PROTECTIVE RELAY FOR POWER SYSTEMS HAVING FAULT
DISTANCE MEASUREMENT FILTER LOGIC

The system is used in a distance-type protective relay which includes a calculation circuit responsive to voltage and current values from a power line to produce a quantity which is analogous to the distance between the relay and a fault on the line, referred to as an m quantity. This quantity is then applied to a distance element/circuit for comparison of said quantity with a setting reach value for a zone one distance protection to determine whether the fault is within zone one protection. The system includes a filter circuit which filters the quantity before it reaches the distance element, resulting in a smoothing of said quantity and rejection of noise therefrom. The system further includes a control circuit which determines whether the filter is to be used in the system in a particular situation, depending upon whether when the value of the quantity is above a selected percentage of the setting reach value.